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MOTOROLA, INC. 1303 EAST ALGONQUIN ROAD IL01/3RD SCHAUMBURG, IL 60196			SHIN, MIN	
			ART UNIT	PAPER NUMBER
			3688	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

Docketing.US@motorola.com

Office Action Summary	Application No. 09/496,960	Applicant(s) ARNESON ET AL.	
	Examiner MIN SHIN	Art Unit 3688	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 August 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15, 17-33 and 35-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-15, 17, 18 and 37 is/are allowed.
- 6) ☒ Claim(s) 19, -33, 35-36 and 38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This Office Action is in response to the amendment filed on 8/21/2009. Claims 1-15, 17-23 and 35-38 are currently pending and have been considered below.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 19 and its dependent claims are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
4. Claim element “means for selecting, means for interrogating, means for repeating, means for incrementing.. etc. ” is a means (or step) plus function limitation that invokes 35 U.S.C. 112, sixth paragraph. However, the written description fails to disclose the corresponding structure, material, or acts for the claimed function. For a computer-implemented means-plus-function claim limitation that invokes 35 U.S.C. 112, sixth paragraph, the corresponding **structure** is required to be more than simply a general purpose computer or microprocessor (e.g inclusion of specific algorithms).

Applicant is required to:

- (a) Amend the claim so that the claim limitation will no longer be a means (or step) plus function limitation under 35 U.S.C. 112, sixth paragraph; or

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(b) Amend the written description of the specification such that it expressly recites what structure, material, or acts perform the claimed function without introducing any new matter (35 U.S.C. 132(a)).

If applicant is of the opinion that the written description of the specification already implicitly or inherently discloses the corresponding structure, material, or acts so that one of ordinary skill in the art would recognize what structure, material, or acts perform the claimed function, applicant is required to clarify the record by either:

(a) Amending the written description of the specification such that it expressly recites the corresponding structure, material, or acts for performing the claimed function and clearly links or associates the structure, material, or acts to the claimed function, without introducing any new matter (35 U.S.C. 132(a)); or

(b) Stating on the record what the corresponding structure, material, or acts, which are implicitly or inherently set forth in the written description of the specification, perform the claimed function. For more information, see 37 CFR 1.75(d) and MPEP §§ 608.01(o) and 2181.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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6. Claims 19-32 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Guthrie (US 5,289,372) in view of Maloney (US 2005/0156739).

Claim 19:

Guthrie discloses a system for conducting an inventory of items with attached tags, comprising means for:

- a. Selecting a remote sensor (collector) to poll a plurality of tags (sensors) within the collector's physical area of control;
- b. Receiving and storing information from the polled tags; c. Repeating the polling by other collectors in the system; and
- d. Processing the received polling information to determine the inventory status of the system (col 3, line 50 - col 4, line 55), wherein the means for interrogating comprises:

At the network tag reader,

Means for transmitting a wake-up signal followed by a first clock signal;

At each tag within the physical area by the coverage pattern of the selected remote access sensor module, means for incrementing a tag count in response to the first clock signal, and

means for transmitting the Tag ID assigned to each tag when the Tag ID of each tag corresponds to the first tag count;

at the network tag reader, means for incrementing a first reader count in response to the first clock signal,

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means for storing a given first reader count when more than one tag responds to the first clock signal that corresponds to the given first reader count, and means for transmitting through the selected remote access sensor module the given first reader count followed by a second clock signal; and

at each tag that responds to the transmitted given first reader count, means for incrementing a second tag count in response to the second clock signal, and means for transmitting a second number assigned to each tag when the second number of each tag corresponds to the second count.

Guthrie fails to disclose a structure for means for selecting one of the plurality of sensor modules.

However, Maloney discloses a similar system where a particular RF sensor is selected using matrix selectors which are controlled by controller 67 (see paragraph 0053, Figures 5 and 7).

Therefore it would have been obvious to a person of ordinary skill in the art at the time of the invention to incorporate the teaching of Maloney into the system of Guthrie so as to select one of the plurality of sensor modules in order to do so the precisely locate and find the position of the RFID tagged items.

Claim 20:

Guthrie and Maloney discloses a system for conducting an inventory of items as in 19 above, and Maloney further discloses the polling information comprises at least one tag ID

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(col 3, line 50 - col 4, line 55). The Examiner notes that a tag ID is comprised of a plurality of bits.

Claims 21:

Guthrie_and Maloney disclose a system as in 20, and Maloney further discloses repeating the steps (col 3, line 50 - col 4, line 55 and col 10, lines 52-57).

Claim 22:

Guthrie_and Maloney discloses a system as in 21, and Maloney further discloses storing information of tags which failed to respond (missing from inventory)(col 13, lines 56-68 and col 21, line 62 - col 22, line 17).

Claims 23:

Guthrie and Maloney discloses a system as in 22, and Maloney further discloses initiating a security measure upon detection that a collector or tag does not respond (is missing) (col 13, lines 56-68 and col 21, line 62 - col 22, line 17). Guthrie discloses sending maintenance personnel to fix a non-responsive collector, but does not explicitly disclose sending the same maintenance personnel if a tag is non-responsive. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to also send the maintenance personnel to fix non-functioning tags also. One would have been motivated to do this in view of Guthrie's disclosure that information about such non-responsive tags is being stored in the database.

Claims 24 and 25:

Guthrie and Maloney discloses a system as in 22, but does not explicitly disclose that the security action taken when a "missing" item is detected consists of turning on a surveillance camera or activating a silent alarm. Guthrie discloses that a maintenance person is dispatched to the "nonresponsive" collector (col 13, lines 56-68) or information about a non-responsive tag is entered in the Disconnect Table (col 14, lines 55-68 and col 21, line 62 - col 22, line 17). While this may be an appropriate response when applied to Guthrie's example system that is tracking the equipment in a widely distributed computer system, it would have been obvious to one having ordinary skill in the art at the time the invention was made to turn on a surveillance camera, activate an alarm (whether silent or not), or take other security measures such as locking all egresses into and out of the area concerned. These are all well known types of measures taken by the security industry when a security abnormality is detected. For example, Automatic Teller Machines (ATMs) have been in widespread use throughout the world for many years. These financial transaction machines use surveillance cameras to record an image of the person conducting the financial transaction on the ATM. However, in order to reduce the amount of memory needed to store the images the camera is not kept running constantly, but is only activated when the system detects the presence of a user. Many of the ATMs will also automatically transmit an alarm signal to the local security agency or police department when an inappropriate transaction situation is detected (such as coercion of a user by another). The type of security action taken would depend upon the type of items being monitored. While in most computer systems Guthrie's sending of maintenance

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personnel may be appropriate such as when a malfunction of the ATM is detected, if the computer system was a highly sensitive classified system used by an intelligence organization or the military, it would be more appropriate to turn on a surveillance camera or to activate a silent alarm instead of sending maintenance (or security) personnel in order to verify the reason for the non-responsiveness of the item and to determine the appropriate response (i.e. sending maintenance personnel if the item is seen to be present or sending security personnel if the item is seen to be missing from its usual place or unauthorized personnel are present).

Claims 26:

Guthrie and Maloney discloses a system as in 20, and Maloney further discloses correlating the information received from each tag to maintain data regarding the location of each tag (col 3, line 50 - col 4, line 55).

Claim 27:

Guthrie and Maloney discloses a system as in 19, and Maloney further discloses that the information is from a tag within the collector's coverage pattern (col 3, line 50 - col 4, line 55).

Claim 28-32:

Guthrie and Maloney discloses a system as in 22 but does not explicitly disclose that the sensor information indicates tag movement, tag vibration, tag temperature, or a security breach comprising one of these parameters. Official Notice is taken that it is old and well

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known in the security arts to use motion, vibration, and/or temperature sensors to detect theft, abuse, or failure of an item. These types of sensors are used in many areas, such as car alarms (motion and vibration); factories, buildings heating/cooling systems, nuclear power plants (temperature); etc. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to monitor movement, vibration, and/or temperature fluctuation of the tagged item. One would have been motivated to monitor these types of elements in order to better determine when an exception status has occurred so the appropriate response could be initiated.

Claim 35:

Guthrie and Maloney disclose a system as in 19 but does not explicitly disclose that the tag reader is a PCMCIA card. The Examiner notes that a PCMCIA card is the common standard used on PC card-based peripherals on portable (and personal) computers throughout the industry and is also the standard name for PC cards which were first introduced in June 1990. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use a PCMCIA card to read the tags. One would have been motivated to use a PCMCIA card in view of its standard usage for such applications throughout the industry.

7. Claims 33 and 36 rejected under 35 U.S.C. 103(a) as being unpatentable over Guthrie (US 5,289,372) in view of Maloney (US 2005/0156739) as applied to claim 19 above, and further in view of Kaplan et al (3,689,885).

Claim 33 and 36:

Guthrie and Maloney disclose a system as in 19 but do not explicitly disclose that the tags are connected to the collector through an electrical power distribution system nor attached to an electrical light fixture. Kaplan discloses a similar system and method for polling tags in which the nodes are connected through an electrical power distribution system (Figure 5A, item 172 and col 9, lines 39-62). While Kaplan does not explicitly disclose connecting to the electrical power distribution system through an electrical lighting fixture, Official Notice is taken that it is old and well known in the electrical arts that items can be connected to an electrical system by direct wiring, outlet plugs, or through light fixtures (the Examiner has used a motion sensor integrated into a light fixture to activate outdoor lighting on his house for years). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to connect the collectors, tags, and other system components through an electrical power distribution system and to use one or more of the usual electrical connection modes to include an electrical lighting fixture. One would have been motivated to connect to such a system in such a manner in order to provide a constant supply of power without needing to replace batteries constantly.

8. Claims 37 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Guthrie (US 5,289,372) in view of Maloney (US 2005/0156739) as applied to claim 19 above, and further in view of Walter (5,856,788).

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Claims 37 and 38:

Guthrie and Maloney disclose a system as in 19 disclose system for conducting an inventory of items as in Claims 1 and 19 above, but does not explicitly disclose the time slot contention is resolved by the tag sending a first plurality of bits of its ID number during a first read and a second plurality of bits during a second read. Walter discloses a similar method and system for wirelessly interrogating identification tags in which each tag transmits a first bit of its identification number during a first read and then subsequent bits during subsequent reads if there was time slot contention during the previous read (col 5, lines 1-50). While it is not explicitly disclosed that a plurality of bits are read each time, it would have been obvious to one having ordinary skill in the art at the time the invention was made that in order to use difference parts of the identification number for multiple reads, the identification number could be divided into subsets containing any number of bits from only one bit as Walter discloses to any number less than the total number of bits. One would have been motivated to use a plurality of bits in order to decrease the time it takes to identify a plurality of items when the identification number consists of a large number of bits. For example, if the identification numbers of 100 items each contains 88 bits, it would take approximately 8,800 reads to identify all 100 items reading one bit at a time. If 4 bits (one byte) at a time were read, it would only take approximately 1,100 reads to identify all 100 items, thus realizing an 8-fold decrease in processing time. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use such a bitwise interrogation (using a plurality of bits per read) of the tags in Guthrie to resolve time slot contention. One would have been motivated to use bitwise

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interrogation in view of Guthrie's disclosure of reading in eight bits of the tag ID at a time until all 26 bits have been received (col 10, lines 5-25).

Response to Arguments

9.

As mentioned in the previous Office Action, Claims 1-15, 17-18 and 37 were deemed allowable after the submitted amendment because they overcome the rejection of prior art and no other art was found at the time of this Office Action. Claims 19-33 and 35-36 and 38 were also deemed allowable if the features of dependent Claim 34 are incorporated into independent Claim 19. However, a new ground of rejection under 35 U.S.C 112 2nd paragraph is now added regarding claims 19-33, 23-36 and 38. The new ground of rejection was necessitated by memorandum released September 2nd, 2008 which puts stricter requirements for invocation of 112, 6th regarding the use of "means for" language. . For a computer-implemented means-plus-function claim limitation that invokes 35 U.S.C. 112, sixth paragraph, the corresponding **structure** is required to be more than simply a general purpose computer or microprocessor (e.g inclusion of specific algorithms). For claim 19, examiner fails to see specific structure other than a simple computing device which would perform the acts of "means for selecting, means for interrogating, means for storing,. Etc). Appropriate action as suggested above under 112 rejection is required.

For link to the memorandum online:

http://www.uspto.gov/web/offices/pac/dapp/opla/preognotice/section_112_6th_09_02_2008.pdf

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to MIN SHIN whose telephone number is (571)270-3463. The examiner can normally be reached on Mon-Fri 9am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Weinhardt Robert can be reached on 571-272-6633. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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/Jean Janvier/

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Primary Examiner, Art Unit 3688